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ENROLLMENTS AND DEGREES

At a time when the academic physics community deals with many outside influences, some of which may call for reassessments of long-range plans, the availability of comprehensive, reliable data helps formulate the answers to a diversity of questions that arise. Our educational data are obtained by means of surveys, the oldest of which is the survey of Enrollments and Degrees. Over thirty years ago the American Institute of Physics began to monitor the number of physics degrees granted annually in the U.S.; gradually this data collection was expanded to include enrollment details as well as pertinent characteristics of both physics and astronomy students.

Shortly after the beginning of each academic year all degree-granting physics and astronomy departments are asked to report the number of degrees they conferred during the previous academic year as well as the size of their current undergraduate and graduate enrollments. This summary report, based on last year's survey, analyzes the 1986–87 degrees and the 1987–88 enrollments. To call attention to recent changes we include five-year or ten-year trends. The major portion of this report deals with analyses of physics students; the astronomy data are summarized in the last two tables.

For the academic year 1987–88, our records show that 757 colleges and universities offered physics degree programs. In **Table I** these institutions are classified according to the highest physics degree granted and four earlier years of data are presented for comparison. The recent increase in doctoral programs involves a second doctoral program in applied physics at Yale University and the expansion of two master's degree programs to doctoral programs at the University of Missouri at St. Louis and Southern Illinois University at Carbondale. Each year interchanges take place whereby existing bachelor's degree programs may be expanded to include a master's degree or discontinued bachelor's degree programs are reinstated.

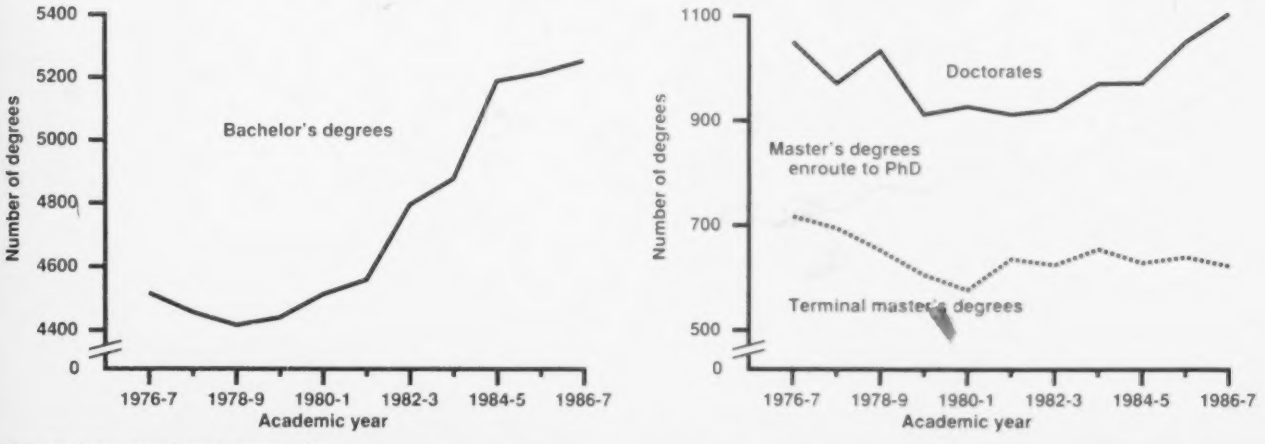
Table I. Institutions by highest physics degree offered, 1983–1988.

Academic year	Doctoral granting*	Master's granting	Bachelor's granting
1983–84	165	92	490
1984–85	168	90	487
1985–86	168	91	485
1986–87	168	90	496
1987–88	170	89	498

**Five of these institutions have two physics doctorate-granting departments. They are Stanford U., U. of CA-Davis, Yale U., Harvard U. and Cornell U.*

The physics degree production presented in **Figure I** displays a variety of trends. Four trends represent the three levels at which physics degrees are granted because we distinguish between terminal master's degrees and those granted enroute to a higher physics degree. Since the early 1980s increases can be observed for doctorates and master's degrees enroute to higher physics degrees while bachelor's degrees are leveling off for the second consecutive year and terminal master's degrees show a decline over the previous year.

Figure I. Physics degrees awarded by academic year, 1976–1987.



Member Societies: The American Physical Society • Optical Society of America • Acoustical Society of America • The Society of Rheology • American Association of Physics Teachers American Crystallographic Association • American Astronomical Society • American Association of Physicists in Medicine • American Vacuum Society • American Geophysical Union

Table II. Physics enrollments and degrees awarded by academic year 1976–1988.

Academic year	Number of physics degrees granted (July 1 to June 30)			Undergraduate physics major enrollments		Graduate physics student enrollments*	
	Bachelor's	Master's	Doctor's	Juniors	Seniors	Total	1st year
1976–77	4517	1469	1051	5711	4930†	9 991	2624
1977–78	4457	1422	971	5820	4975††	9 835	2499
1978–79	4416	1428	1033	5835	4964	9 813	2458
1979–80	4440	1370	912	5696	4942	9 647	2439
1980–81	4513	1387	927	5905	5091	9 934	2564
1981–82	4558	1476	912	6386	5372	10 173	2637
1982–83	4795	1426	921	6299	5580	10 429	2630
1983–84	4878	1521	971	6303	5658	10 922	2855
1984–85	5188	1518	972	6601	6009	11 337	2863
1985–86	5214	1589	1051	6689	6092	12 011	2981
1986–87	5253	1596	1105	6592	6119	12 616	3162
1987–88				6412	5959	13 143	3274

**Includes part-time students.*
†This total has been adjusted by 500 students who were seniors for more than one year.
††This total has been adjusted by 300 students who were seniors for more than one year.

Table III. Undergraduate and graduate enrollments and degrees by institution type, 1976–1988.

Academic year	Number of physics degrees granted (July 1 to June 30)			Undergraduate physics-major enrollments		Graduate physics student enrollments*	
	Bachelor's	Master's	Doctor's	Juniors	Seniors	Total	1st year
			Doctorate granting institutions				
1976–77	2184	1186	1051	2862	2502	8 867	2182
1977–78	2218	1164	971	2851	2590	8 852	2138
1978–79	2158	1183	1033	2937	2579	8 864	2107
1979–80	2142	1151	912	2696	2491	8 744	2072
1980–81	2123	1161	927	2765	2568	9 062	2223
1981–82	2179	1281	912	2996	2671	9 273	2275
1982–83	2192	1210	921	2962	2645	9 524	2288
1983–84	2195	1319	971	2955	2824	10 006	2495
1984–85	2460	1286	972	3059	3105	10 357	2443
1985–86	2377	1358	1051	3120	2961	10 937	2574
1986–87	2473	1357	1105	3132	3148	11 389	2667
1987–88				3030	2991	11 880	2737
			Master's granting institutions				
1976–77	658	283		840	761	1078	442
1977–78	590	258		832	752	983	361
1978–79	541	245		795	694	949	351
1979–80	585	219		705	650	903	367
1980–81	589	226		868	655	872	341
1981–82	532	195		917	734	900	362
1982–83	554	216		877	752	905	342
1983–84	610	202		830	722	916	360
1984–85	658	232		974	781	980	420
1985–86	632	231		1014	865	1074	407
1986–87	660	239		913	791	1227	495
1987–88				871	750	1263	537
			Bachelor's granting institutions				
1976–77	1675			2009	1667		
1977–78	1649			2137	1633		
1978–79	1717			2103	1691		
1979–80	1713			2295	1801		
1980–81	1801			2272	1868		
1981–82	1847			2473	1967		
1982–83	2049			2460	2183		
1983–84	2073			2518	2112		
1984–85	2070			2568	2123		
1985–86	2205			2555	2266		
1986–87	2120			2547	2180		
1987–88				2511	2218		

**Includes part-time students.*

Table IV. Introductory physics enrollments for the fall term, 1987–88.

Courses in which the following potential majors are enrolled	Institution type: Bachelor's granting N	%	Master's granting N	%	Doctorate granting N	%	Total N	%
Engineering majors	18 080	28	12 830	35	70 390	44	101 300	39
Physical sciences majors*	17 700	27	7 950	22	28 640	18	54 290	21
Biology, health-related majors	19 900	31	10 670	29	41 370	26	71 940	28
Other	8 800	14	4 950	14	18 720	12	32 470	12
Total introductory enrollment N	64 480		36 400		159 120		260 000	
%		25		14		61		100%

**Includes physics, chemistry, mathematics, etc.*

The data on which **Figure I** is based are presented in **Table II** together with undergraduate and graduate enrollment trends. Thus since 1976–77 both undergraduate and graduate physics enrollments recorded substantial increases; however, by focusing on the most recent years, only the graduate students continue their upward trends while the numbers of juniors and seniors appear to fluctuate.

Following the criterion used in **Table I**, we examined the enrollment and degree trends for each of the three types of institutions and thereby created **Table III**. Thus the recent leveling in bachelor's degrees indicated in **Table II** emerges as increases in degrees granted by the two types of graduate institutions and a corresponding decrease at the four-year colleges. The increasing number of graduate students appears to be distributed proportionately between the two types of graduate institutions.

Introductory physics enrollment

Many colleges and universities include an introductory science course among their requirements for a bachelor's degree. Hence, the introductory physics enrollment includes not only students motivated by their intellectual curiosity, but also those undergraduates whose institutions have decided that understanding something of the world of science is desirable. Many institutions offer several introductory physics courses, some of which are designed for specific groups of majors. For example, engineering and physical sciences majors are expected to take calculus-based introductory courses, whereas health-related majors, by and large, take the algebra-based courses. The collective introductory enrollment for all physics degree granting institutions is over one quarter of a million and only 9,000 of the students can be identified as freshman physics majors. **Table IV** presents the introductory physics enrollment for each of the three types of institutions and indicates that some 200,000 undergraduates, who do not intend to major in one of the physical sciences, enroll in a physics course each term.

Undergraduate physics majors

At most institutions the required course work for a physics bachelor's degree extends over a four-year period; hence potential physics students are very likely to declare their majors during the freshman year. A result of this pattern is that physics department chairpersons can estimate the numbers of freshmen and sophomores who will formally declare their physics majors as they become juniors. By using the estimated totals for freshmen and sophomores together with the actual reports of juniors and seniors over a four-year period, we have been able to observe the net attrition between the freshman and senior years for each graduating class. **Figure II** presents four graduating classes the first of which, the class of 1988, is based entirely on actual data; the other three classes include projections. Thus the physics majors of the class of 1988 were freshmen in September 1984. **Figure II** follows them through four years of undergraduate study and records those decreasing totals. Last September's estimate of 8908 freshman physics majors was the largest ever recorded since we began asking for data on freshmen in 1973–74. Our projected number of seniors for the class of 1991 is 6100.

Figure II. Actual and projected number of undergraduate physics majors.

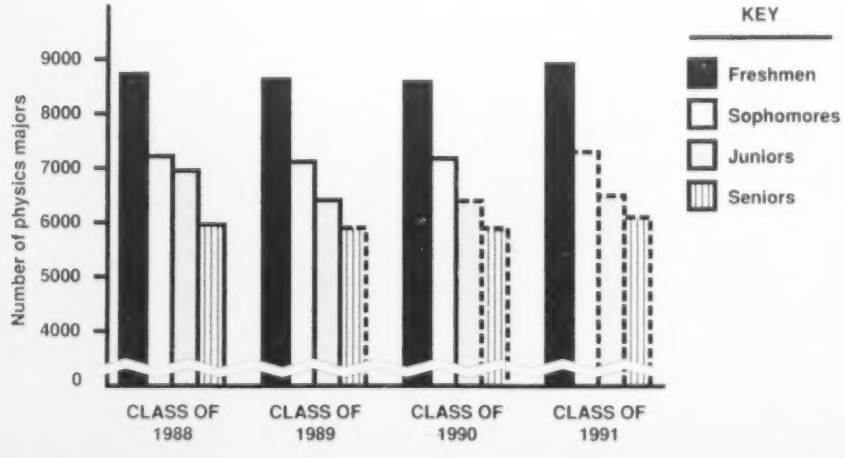


Table V. Attrition of undergraduate physics majors by type of institution, 1976–77 to 1986–87.

	Doctorate granting institution		Master's granting institution		Bachelor's granting institution	
Graduating class	No. of freshmen	% reaching sr. year	No. of freshmen	% reaching sr. year	No. of freshmen	% reaching sr. year
1980	3400	74%	1110	60%	3200	56%
1981	3450	73	1070	63	3310	57
1982	3520	73	1140	63	3410	59
1983	3590	72	1160	63	3510	60
1984	3770	74	1250	60	3550	60
1985	3890	75	1160	68	3560	60
1986	3940	78	1170	69	3570	61
1987	3930	77	1120	71	3590	61

Although the overall attrition of physics majors remained at approximately 30%, the success with which the small and large institutions compete for and retain physics majors through four undergraduate years varies significantly for the three types of institutions. **Table V** analyzes the attrition rates by comparing the numbers of freshmen who are viewed as potential physics majors with the proportion that reaches senior status three years later. For example, by dividing the 1986–87 seniors by the corresponding number of freshmen (1983–84) for each type of institution, we find that 77% of the freshmen at PhD-granting schools reached senior status while only 71% of a similar group at the master's institutions and only 61% of the freshmen at the four-year colleges did so. **Table V** also shows how retention rates changed during the most recent eight-year period, and that the master's institutions were more successful at lowering their attrition than the other two types of institutions.

A more detailed distribution of the four levels of undergraduate physics majors is presented in **Table VI**, which shows these enrollments for nine geographic regions as well as by type of degree-granting institution. The last column of this table, "Fifth-year undergraduates," consists of 1058 students who need an additional summer or term to complete their degree requirements. Such delays can be attributed to any of a number of reasons the most common of which are completing the senior year on a part-time basis or having transferred from a two-year college. Approximately 10% of the 1987 bachelors fell into each of these two categories. Thus by separating those 1058 seniors from the others, physics majors at each level are counted only once. The lower portion of **Table VI** presents the kinds of information, undergraduate enrollments by type of institution, from which the trend data of **Table V** were calculated.

Table VI. Undergraduate physics majors by geographic region and type of institution, 1987–88.

Geographic region*	Estimated** no. of freshmen	Estimated** no. of sophomores	Number of juniors	Number of seniors	Fifth-year undergraduates
New England	678	585	509	552	49
Mid. Atlantic	1558	1342	1068	962	96
E. N. Central	1363	1098	968	907	167
W. N. Central	734	556	509	522	84
S. Atlantic	1400	1161	927	788	111
E. S. Central	360	300	277	256	53
W. S. Central	809	583	536	479	73
Mountain	607	460	447	412	113
Pacific	1399	1095	1171	1081	312
Total	8908	7180	6412	5959	1058
Doctorate granting inst.	4074	3260	3030	2991	603
Master's granting inst.	1125	885	871	750	168
Bachelor's granting inst.	3709	3035	2511	2218	287

** New England–CT, ME, MA, NH, RI, VT; Middle Atlantic–NJ, NY, PA; East North Central–IL, IN, MI, OH, WI; West North Central–IA, KS, MN, MO, NE, ND, SD; South Atlantic–DE, DC, FL, GA, MD, NC, SC, VA, WV; East South Central–AL, KY, MS, TN; West South-Central– AR, LA, OK, TX; Mountain–AZ, CO, ID, MT, NV, NM, UT, WY; Pacific–AK, CA, HI, OR, WA.*
***Estimates of potential physics majors are made by the physics department chairpersons.*

Graduate enrollment

When the total graduate physics enrollment reversed its ten-year decline in 1980 to resume an upward trend, it was the foreign students who caused this change in trend. At the undergraduate level foreign students comprise only 5% because the great majority of them enter the U.S. with the equivalent of bachelor's degrees and the intention to complete physics doctorates. **Table VII** focuses on the first-year graduate physics students and the ratios of U.S. to foreign citizens among them. Ten years ago one out of four students was foreign; in 1987–88 two out of five students are foreign. The separate trends indicated by these two groups of entering graduate students differ greatly. U. S. students declined from 3,000 in the early 1970s to 1,600 in 1982 before resuming an upward trend. Foreign students, on the other hand, increased rapidly from 1975 on, but appear to be leveling off.

Table VII. Trend in entering U.S. and foreign graduate physics students, 1978–1988.

Academic year	No. of first-year graduate students U.S.	Foreign	Total	% foreign students of total
1978–79	1840	618	2458	25.1
1979–80	1700	739	2439	30.3
1980–81	1720	844	2564	32.9
1981–82	1654	983	2637	37.3
1982–83	1576	1054	2630	40.1
1983–84	1763	1092	2855	38.2
1984–85	1747	1116	2863	39.0
1985–86	1721	1260	2981	42.3
1986–87	1799	1363	3162	43.1
1987–88	1944	1330	3274	40.6

Approximately 10% of all graduate physics students are enrolled at the master's institutions, and that proportion has hardly changed during the past decade as indicated in **Table VIII**. However the composition of the student body at these two types of graduate institutions did undergo several changes. For example, the influx of foreign students at the master's institutions changed the traditional 1:1 ratio of full-time to part-time students to a 2:1 ratio as foreign students tripled their numbers since 1978. The reason for so large a proportion of part-time students, up until 1980, is that one of the major functions of master's institutions has been that of providing part-time graduate programs for the employees of industrial companies in their geographic areas. By 1986, foreign graduate students comprised one-third of the enrollment and because they hold visas that make them ineligible for off-campus employment, most of them are full-time students. Changes at the PhD-granting institutions include a 120% increase in foreign students since 1978.

Since very few foreign students receive support from their native countries, they are obliged to compete with U.S. students for the available teaching assistantships at the institutions that enroll them. **Table IX** indicates that approximately half of the teaching assistantships at either type of graduate physics department are held by foreign students. The total number of teaching assistantships rose by a few percent over the previous year and retains its uneven geographic distribution.

Table VIII. Full-time and part-time graduate physics enrollment by type of institution, 1978–1988.

Academic year	Graduate students at doctorate granting institutions: Full-time	Part-time	Foreign	% foreign of total	Total	Graduate students at master's granting institutions: Full-time	Part-time	Foreign	% foreign of total	Total
1978–79	8 185	679	2 175	24.5	8 864	468	481	157	16.5	949
1979–80	8 059	685	2 390	27.3	8 744	550	353	146	16.2	903
1980–81	8 302	760	2 540	28.0	9 062	484	388	163	18.7	872
1981–82	8 555	718	2 894	31.2	9 273	543	357	213	23.7	900
1982–83	8 712	812	3 193	33.5	9 524	566	339	221	24.4	905
1983–84	9 285	721	3 433	34.3	10 006	569	347	254	27.7	916
1984–85	9 647	710	3 811	36.8	10 357	604	376	293	29.9	980
1985–86	10 119	818	4 259	38.9	10 937	620	454	306	28.5	1074
1986–87	10 583	851	4 519	39.7	11 389	772	455	397	32.4	1227
1987–88	11 015	865	4 813	40.5	11 880	797	466	448	35.5	1263

Table IX. Regional distribution of U.S. and foreign teaching assistants by type of institution, 1987–88.

Geographic region*		Doctorate-granting institutions: Total no. of TA's	Total no. of foreign TA's	Master's-granting institutions: Total no. of TA's	Total no. of foreign TA's
New England		534	278	33	26
Mid Atlantic		749	458	29	6
E. N. Central		746	338	151	80
W. N. Central		266	130	64	32
S. Atlantic		560	259	62	22
E. S. Central		145	83	44	26
W. S. Central		428	235	58	34
Mountain		327	170	8	4
Pacific		591	235	79	16
Total	N	4346	2186	528	246
	%		50.3%		46.6%

**See Table VI for explanation of geographic region.*

Table X. Unfilled teaching assistantships for first-year graduate physics students, September 1987.

Geographic region*	Doctorate granting						Master's granting				
	departments with				No. of unfilled ass'tships	No. of 1st yr. grad. students	departments with			No. of unfilled ass'tships	No. of 1st yr. grad. students
	0	1–2	3–5	>6			0	1–2	3–5		
	unfilled assistantships						unfilled assistantships				
New England	19	3	0	0	4	333	3	0	1	3	43
Mid Atlantic	27	1	1	0	5	459	7	0	0	0	32
E. N. Central	23	0	0	0	0	444	18	3	0	5	155
W. N. Central	10	2	1	0	6	151	10	2	0	2	42
S. Atlantic	21	2	3	0	15	306	12	4	0	5	71
E. S. Central	10	0	0	0	0	81	6	2	0	4	25
W. S. Central	15	0	0	0	0	253	9	1	0	1	61
Mountain	15	0	0	1	7	222	2	1	0	1	14
Pacific	20	1	0	0	2	488	7	2	0	3	88
Total	160	9	5	1	39	2737	74	15	1	24	531

**See Table VI for explanation of geographic region.*

One aspect of financial support that potential graduate physics students may not be aware of is that each year some teaching assistantships for first-year students remain unfilled. **Table X** indicates on a geographic basis where the unfilled assistantships are and how many exist at doctoral or master's-granting departments. The total number of unfilled assistantships has been decreasing gradually. For the first time since 1981, when we began to record and publish these data, three geographic regions filled all their assistantships; on the other hand, the PhD-granting departments in the South Atlantic region is almost always the one with the largest number of unfilled assistantships.

Degrees granted

The median number of years of graduate study required to complete a physics doctorate remains between five and six years and has a range from three to more than ten years. The high correlation between the first-year graduate students at PhD-granting institutions and the number of doctorates granted five years later is the basis for our projection presented in **Figure III**. In recent years the percentage of entering graduate students who completed their doctorates in five years rose from 46% to 48%, a change undoubtedly attributable to the increase in foreign students. Using this increased ratio we project the number of physics doctorates conferred in 1992 to reach 1300.

Figure I and **Table I** referred to the four types of physics degrees granted by three types of institutions; **Table XI** presents the degree data for 1986–87 in considerable detail. For example, each year the smallest group of graduates is the one receiving master' s degrees enroute to higher physics degrees from master's-granting institutions. The class of 1987 included 76 such graduates who were obliged to transfer to doctoral institutions to continue their studies.

Terminal master's degrees are primarily granted by doctoral institutions rather than by master's institutions as shown in **Table XI** which indicates a 3:1 ratio for that degree production.

Figure III. Actual and projected number of physics doctorates granted, 1977–1992.

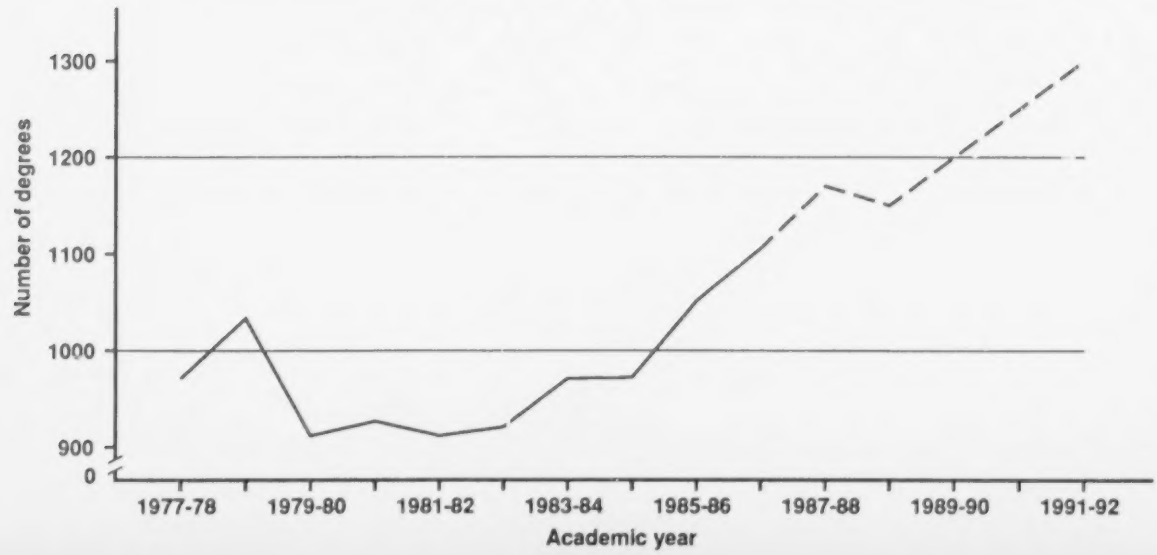


Table XI. Physics degrees by type of institution and geographic region, 1986–87.**

Geographic region*	Bachelor's degrees			Master's degrees		Terminal master's degrees		Doctorates
	Institution type			Institution type		Institution type		Institution type
	I	II	III	II	III	II	III	III
New England	153	25	338	4	124	6	51	148
Mid. Atlantic	471	40	460	5	184	7	73	233
E. N. Central	325	167	312	49	143	33	103	183
W. N. Central	220	57	120	8	26	11	28	64
S. Atlantic	292	101	268	12	78	19	61	94
E. S. Central	100	69	76	6	32	8	13	15
W. S. Central	163	65	184	2	56	20	35	79
Mountain	85	6	230	2	47	3	27	65
Pacific	311	130	485	18	177	26	99	224
Subtotal	2120	660	2473	106	867	133	490	1105
Subtotal				973		623		
Total		5253			1596			1105

See Table VI for explanation of geographic region.
***Institution type indicates the highest physics degree offered; type I = bachelor's degree, type II = master's degree, type III = doctorate.*

Closely tied to the data we collect and analyze on foreign student enrollment in physics programs are our data on minority groups, because a majority of these individuals are foreign citizens. We define minority groups as those who have a small but noted representation among the physics degree recipients, a definition that clearly applies to women physics graduates. Thus **Table XII** focuses on the most recent academic year, 1986–87, and lists specific minority groups by sex, but irrespective of citizenship. The sources of this information are (1) a report from physics department chairpersons and (2) identification with minority groups by individual graduates. The second source forms part of two student surveys* conducted annually by the American Institute of Physics. The response rates from these two surveys differ significantly; only between 55% and 65% of the students return their questionnaires, whereas over 90% of the physics departments complete theirs (although in some cases they indicate that information on minorities is not available). Two years ago we began to provide an outline on the back of the form and called attention to it in the cover letter. As a result, chairpersons improved their responses by giving us a more accurate count of the number of women and minorities who were granted physics degrees in 1986–87. Since 1985 the number of black women among the physics bachelors more than doubled.

* *"Survey of Physics and Astronomy Bachelor's Degree Recipients," AIP Pub No. R-211.19*

"Graduate Student Survey," AIP Pub No. R-207.20

Table XII. Number of physics degrees granted by sex and minority group* status, 1986–87.

Type of degree	Sex	Total no. of degrees	Black	Native American Indian	Hispanic	Oriental	Asian Indian	Arab
Bachelor's	Men	4441	147	2	65	164	31	46
	Women	812	48	2	6	22	16	2
	Total	5253	195	4	71	186	47	48
Master's enroute	Men	869	14	2	7	136	42	13
	Women	104	0	0	0	29	15	1
	Total	973	14	2	7	165	57	14
Terminal master's	Men	521	10	0	8	95	28	12
	Women	102	3	0	1	12	11	2
	Total	623	13	0	9	107	39	14
Doctorate	Men	1007	7	0	15	162	48	25
	Women	98	2	0	2	18	10	5
	Total	1105	9	0	17	180	58	30

Minorities in AIP surveys are defined as groups with a low representation in the physics community, but ones whose participation has aroused considerable interest.

ASTRONOMY

Table XIII. Trend in astronomy enrollments and degrees, 1978–1988.

Academic year	No. of astronomy degrees granted (July 1 to June 30)				Undergraduate astronomy major enrollments		Graduate astronomy enrollments	
	Bachelor's	Master's enroute	Terminal master's	Doctor's	Juniors	Seniors	Total	1st year
1978–79	165	42	42	90	270	249	710	145
1979–80	165	27	27	106	262	242	698	154
1980–81	156	34	24	82	275	238	686	164
1981–82	181	54	15	70	252	224	647	142
1982–83	138	61	22	81	274	232	670	178
1983–84	137	51	22	74	242	217	688	154
1984–85	145	56	16	66	239	212	716	151
1985–86	169	61	24	86	232	252	711	170
1986–87	172	38	23	72	268	255	755	173
1987–88					249	285	731	171

Students interested in astronomy benefit from a greater number of options than their physics counterparts, because they can begin to concentrate on their major either at the undergraduate or graduate level and they have a choice of two types of departments, the separate astronomy departments or the combined physics and astronomy departments. The number of combined departments has decreased gradually from 34 in 1976 to 26 in 1987. Separate astronomy departments, on the other hand, remained constant in number and continue to enroll the majority of astronomy students. The ten-year trend data presented in **Table XIII** combines the enrollments and degrees reported by both types of astronomy departments. The number of undergraduate majors and bachelor's degrees have not changed much from the previous year. **Table XIV** presents in detail the most recent enrollment and degree data. Unlike physics, the graduate astronomy departments appear to have a large pool of applicants from which to select their graduate students. Doctoral departments offer an acceptance to only one in ten applicants. On the other hand, the major contributors to the enrollment in introductory astronomy courses are the physics departments.

This report was prepared with the help of Patrick J. Mulvey and Mark C. Didriksen.

Table XIV. Astronomy* enrollments 1987–88 and degrees 1986–87 by type of institution.

		Bachelor's granting	Master's granting	Doctorate granting	Total
Astronomy departments	Combined	14	2	10	26
	Separate	6	2	31	39
	Total	20	4	41	65
Astronomy degrees	Bachelor's	27	10	135	172
	Master's enroute	–	1	37	38
	Terminal master's	–	3	20	23
	Doctor's	–	–	72	72
Astronomy enrollments	Introductory enrollments in astronomy dept's.	4396	2040	31 715	38 151
	Introductory astronomy enrollments in physics depts.	–	–	–	65 191
	Total introductory enrollments	–	–	–	103 342
	Junior astronomy majors	48	20	181	249
	Senior astronomy majors	57	16	212	285
	No. of applicants to graduate programs	–	34	1 909	1 943
	No. of acceptances to graduate programs	–	19	194	213
	First-year graduate students	–	15	156	171
	Total graduate enrollment	–	38	693	731

**This survey includes only degree-granting astronomy departments.*